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ESTABLISHED BY SAMUEL WAGNER.

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W. F. CLARKE

AND

MRS. E. S. TUPPER.

THOMAS G. NEWMAN, MANAGER.

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in their lives, and at a time when the Bees could not gather any. * * * But it is by no means easy to determine when there is an entire absence of pollen, or its essential equivalent in the hive."

There may not be a particle of it discoverable in the cells, and yet a store of it amply sufficient for the needs of the larvæ may be deposited in the stomachs of the workers, or their general organism. I hope, from the above, Mr. Butler will see that his Bees had some pollen.

ARGUS.

For the American Bee Journal.

Good Bee Location—Rape Seed.

MR. EDITOR:—It is with a great deal of hesitation and a troubling of conscience, that I again ask for a corner in the JOURNAL, for I have already had rather more than my share of "space." But there are a few words that I would like to say.

Mr. Colburn, in the December Number, would like to know where he can find a good place to start an apiary, not too far from Chicago. Now, I don't wish to boast of my locality, nor would I like to coax any one here, lest he should afterwards be discontented and then blame me for so doing. Therefore, I would say, that he could find many such places as he mentions, between here (Berlin) and Milwaukee,—there is plenty of Basswood; and the country is old enough so that white clover has well set in, wherever it has an opportunity to grow. In addition to this, we have plenty of buckwheat—at least in this vicinity—and also many cranberry marshes, which were referred to as being of value, by the editor, in the November Number of the AMERICAN BEE JOURNAL.

Berlin is about 180 miles from Chicago, and can now be reached without change of cars, via Milwaukee, which is 90 miles from Chicago.

If the gentleman wishes further information I shall be glad to answer his questions through the mails. The best way, however, to ascertain the truth, would be to pay us, or this part of the country, a visit.

Mr. Frank W. Chapman gives a report from his rape seed. I am sorry he is so sensitive as to give up its culture, because his neighbors make fun of him about his "turnip patch." But I don't see any fun in it. Mr. Dadant and my brother, in Illinois, planted turnips *expressly* for Bees; and I can't see where the laugh comes in. But some people are, perhaps, more easily amused than your humble servant. He further states that he thinks it was too dry. Well, from what I have learned about the weather in Illinois last Summer, I should think it *was* too dry. Mr. Dadant reports nearly an entire failure, 1,000 lbs. only, from 230 stocks, I think, because of the severe drought.

Rape seed should be planted on good, rich soil—soil where wheat or other grain has been raised, will be good, because grain will leave that portion of nutriment in the soil which rape requires—and, of course, the weather must be favorable for it, as well as for other farm products. Lastly, the time for harvesting must be well watched; as soon as the kernel is filled and turns, cut it; and as soon as sufficiently dry, haul it in.

Mr. Editor, the December issue is, in my judgment, of extraordinary interest. Long live the AMERICAN BEE JOURNAL! for it is the "right bower" in the pack of different Bee journals that adorn our shelf.

J. D. KRUSCHKE.

Berlin, Wis.

For the American Bee Journal.

Chips from Sweet Home.

Two years ago I lost six hives by disease, and last winter I lost fifty-five hives, being all I had. They were left on their summer stand. This Winter I put ninety-five hives in my cellar during the first cold snap, all but seven were put in three days after they flew, the seven two days later, Nov. 28th. I now have four cases of the disease out of the seven. They have been very uneasy ever since taken in. My cellar is 20x24, the sides and bottom are cemented, a chimney built on the bottom of the cellar, with an opening at the bottom in which there is a continual draft, besides four windows which I open nights to cool

the cellar and close daytimes. I have never given my opinion as to the cause of the disease, for I had none. I noticed Bees which were housed *early* escaped the disease.

I will now give what I suppose to be the *cause of the disease*, and if there are any exceptions we shall be pleased to hear them.

All Bees which have died of the disease have been exposed to a *week or more* of cold weather, during which time they *gorge* themselves with honey, if then they are moved into cellars or Bee houses, or are kept confined by cold weather so that they are unable to empty themselves, dysentery will be the effect every time.

Will "Novice," or others who have fed sugar syrup, try an experiment as follows? Leave a hive out during a week or more of cold weather, then, without allowing them to discharge, take them in a Bee house or cellar, and report the result.

To-day I set the four ill-fated hives out and let them fly.

D. D. PALMER.

Eliza, Mercer Co., Ill.

Bee Notes from Darwin.

Bees have solved a recondite problem. They have made their cells of a proper shape to hold the greatest possible amount of honey, with the least possible consumption of precious wax, in their construction.

No human workman is skilful enough to do what a crowd of Bees can do—working in a dark hive—make cells of wax of the true form.

The number of humble Bees in the country will depend upon the number of cats! How can that be? Because the number of Bees is dependent upon the number of field mice, which eat the Bees. Hence the more cats, the fewer mice; and the fewer mice, the more Bees.

If the whole germs of Humble-Bees became extinct, or very rare, the heart's ease and red clover would become rare or wholly disappear. How is that? Because Bees promote the growth of those flowers. The visits of Bees are necessary to the fertilization of some kinds of

clover, and almost indispensable to the fertilization of the heart's ease, for these Bees do not visit this flower. Humble-Bees alone visit red clover as other Bees cannot reach the nectar.

In a word—no Bees, no seed; no seed, no increase of the flower. The more visits from Bees, the more seeds from the flower; the more seeds from the flower, the more flowers from the seeds.

Nearly all our orchidaceous plants absolutely require the visits of insects to remove their pollen-masses and thus to fertilize them.

Twenty heads of unprotected Dutch clover yields 2,990 seeds. The same number protected from Bees produced not one seed; 100 heads of unprotected red clover yielded 2,700, and the same number protected from Bees not a seed.

Pruning Broods.

Pruning brood combs is generally quite unnecessary, in fact is more often injurious than otherwise. If they ever require excision, it can only be when they are so overcharged with pollen as to render breeding impossible, in which case the operation should be performed in the Spring. Pruning them after the Bees have swarmed and cast, is very unwise for several reasons. First, there is a possibility that during a glut of honey, the Bees would build an excess of drone comb, or supposing their queen to be lost, that they would build drone comb exclusively, if any; second, that having to replace the excised comb, they would be less likely to yield a surplus in their super; and, third, there is the undoubted fact that Bees winter much better in old combs than in new ones, because being coated with so much silky fibre, they are the warmer of the two, and again there is the chance that in an unfavorable season they may be unable to build any comb at all.—*British Bee Journal*.

A person who has familiarized himself to Bees, can by means of the passion of fear impressed upon them, and by that dexterity in the management of them, which can only be acquired by practice, manage Bees as he pleases.—*Wildman*.

I bought six small black colonies in June, and now I have twenty-six in good condition, all Italianized. They are now carrying in two gallons of flour daily. Bees are wintering as well as I ever saw them. I have abandoned the bee-house and winter my bees out of doors."

D. D. PALMER, Eliza, Ill., writes:—"The seven diseased hives which I had, are now (Feb. 7) all dead, and fifteen more are diseased. I have seventy-eight left; the most of them look well."

JOSEPH M. BROOKS, Columbus, Ind., writes:—"My seventeen colonies of bees are in the cellar, wintering on sugar syrup exclusively. All are in the best condition, so far."

G. E. CORBIN, St. Johns, Mich., writes:—"By actual measurement, I find that fifteen worker brood-cells made by black bees, span three inches; while fourteen worker brood-cells made by Italian bees, span the same distance. That is, nine square inches of surface of brood-comb made by black bees, contain two hundred and twenty-five cells; whereas, the same surface of brood-comb made by Italian bees, contains only one hundred and ninety-six cells. Does not this difference in the size of the cells indicate a corresponding difference in the size of the bees? I believe the usual process of Italianizing supplies the queen with the combs of black bees only. Is it, therefore, possible to rear full-sized and perfect Italian progeny in those cells? If so, what sized cells will they, in their turn, build? Will some one of experience answer these questions?"

EDGAR McNITT, Centre Village, O., writes:—"My bees have done very well the past season. I am able to report an average of about fifty pounds of honey to the hive. One hive, furnished with empty combs, gave me three swarms and eighty pounds of honey. Including the increase in swarms, my nett profit for the season was one hundred and twenty-five per cent. Last year I wintered two swarms, one on sealed, the other on unsealed honey, and both came through in good condition. I had a swarm of half-bloods that died while I was trying to Italianize them. There were no signs of dysentery. To ascertain that the honey had nothing to do with their death, I procured a starved swarm, and put it in the depopulated hive without cleaning it out in the least, and the bees flourished as well as any of my other swarms."

JONAS SCHOLL, Lyons Station, Ind., writes:—"I am somewhat in doubt as to the best way of doubling colonies. In the past two years there has not been very good success in this region in the method of taking full frames from a hive to be doubled, and filling out with empty ones. It seems to cut the hive in two. The queen often will not cross the

empty space, but remains on one side of the hive. On the opposite side the combs will be filled with honey as fast as the brood hatches, while the new comb built on that side, will most likely be all drone comb. As a strong colony, with a prolific queen, when placed in an empty hive, builds comb rapidly, if the yield of honey is good, may we not conclude that when comb is to be built for all the increase, the best plan is to divide the bees only, not the comb? Bearing in mind that in this locality very little comb is built before May 15, and after June 25, will some practical bee-keeper give us the benefit of his knowledge on this subject? Bees are wintering finely here."

B. G. FORBUSH, Algona, Iowa, writes:—"I am but a novice in bee-culture. One year ago next April, I purchased twenty stands of bees. During the early summer of last year, I increased to forty stands, by artificial swarming. I am surrounded with basswood, but there was a total dearth in its bloom. About the first week in July, I was surprised with the sudden filling up of every available cell of my hives with a very thin, washy, acrid honey, which proved to be sumac honey. I was nonplussed, and wrote to Mr. Gallup in regard to it. He advised me to extract it, and keep it for feeding purposes. I had no sooner begun to follow this advice, when, to my surprise, it was evaporated to a fair consistency, and after six months I find it much less acrid, and good for table use. The months of August and September were gay with golden-rod and many other wild flowers. My hives were soon filled with honey of the best quality, and the hives were literally stuffed with bees and brood. In view of what Prof. Cook says about late brood, I tremble, for there was no speck of brood in my hives after the 15th of September. But I carried my hives into winter quarters full of honey, and populous with bees. I put thirty-two stands in the cellar, with from three to six inches of air-space under the combs, and heavy, white ducking over the frames according to Mrs. Tupper's plan. They are in good condition. I took out about three hundred pounds of surplus honey. Nine "New Idea" hives were left on summer stands, banked up with snow, *a la* Gallup. From this, my first year's experience, I prefer a four thousand inch hive."

JOHN WAHL, Greenfield, Ill., writes:—"Last season I went into winter quarters with forty-one hives, coming out in the spring with twenty-six. I had only four swarms winter on the summer stands. I use the Langstroth hives, of thirteen frames. The last four seasons have been so dry that we have had no flowers out of which to make honey, and so, whatever the breed of bees or the kind of hive used, our failure has been unavoidable."

Voices from among the Hives.

ARCHIBALD SMITH, Roswell, Ga., writes:—"The season here, although *mild*, has been so *wet* since January, that bees have hardly got a living; notwithstanding the fruit bloom was very abundant."

JOHN DAWSON, Pontiac, Mich., writes:—"This has been a poor spring for bees. They wintered well enough till March, but there have been many days that were just warm enough for bees to fly and get lost. I have known bees to gather pollen from the gray willows, on the 7th and 8th of March; but it was April 20th, this year, before any were taken in, and we have had frosty nights and cold, bleak days ever since. The buds on fruit trees have hardly begun to swell yet."

W. A. B., Bridgeport, Ct., writes:—"The best thing I have ever tried for ee-stings, is to first pull out the sting, and then take a small tube, the end of a hollow key for instance, and firmly press round the sting for a short time. The reasons for its action, I think, are two: first, it presses out the poison; second, it bruises the flesh so as to partly stop its spreading. It must be done very quick to do any good. I have tried it, and a good many other remedies, and this has done the best."

H. W. WIXOM, Mendota, Ills., writes:—"The past winter has been easy on bees, but the spring has been very rough. I have lost nearly one-third of mine since the middle of March. There has been so much high and cold wind it seemed to prevent them from breeding, and the old bees are thinning out very fast. Those that are left will be very weak. The case is about the same generally throughout this section of country. It is now raining and cool, and it is hard to tell what the final result will be."

HENRY CLAUSSEN, Mishicott, Wis., writes:—"My bees have wintered well. I put them into the cellar Nov. 5, seventy-one in number, and carried forty-two of them out April 2, and the rest April 8. I lost only one hive, because they had nothing more to eat. Three colonies lost their queens. One was an old queen, but the other two were raised last summer. My bees are all in good condition, although the weather has been cold almost all the time since I took them out. On April 20 we had a snow storm; the snow was lying about a foot deep, and a good deal of it is lying on the ground yet (April 15). Some of my colonies have brood in four, and some in five frames. I hope for a good season."

E. A. SHELDON, Independence, Iowa, writes:—"My nineteen stands of bees that I put in cellar on Nov. 18, were taken out April 17, all alive and in splendid condition, save two that died for want of bees enough to keep up natural heat. They had plenty of natural stores. The seventeen that are left are working at a rapid rate, bringing in both honey and pollen, although no fruit trees are in blossom yet. They have gathered from the willow, mostly, of which we have an abundance here. I wintered in a dry cellar, with caps off, board raised, and front entrance open full size. The thermometer ranged from 32 degs. to 40 degs., generally from 34 degs. to 38 degs. Occasionally I raised it to 50 degs. by artificial heat. They were quiet all winter, and had no disease or mouldy combs, are now about one-half full of brood. I use the Gallup frame hive. I have used other sizes, but like this best."

WM. MORRIS, Sidney, Iowa, writes:—"The past winter has been a long one with us, but rather mild, and bees seem to have consumed more honey than usual. The spring is very backward, and now (April 20th) the ground is covered with snow. We have had two days since the elm came out in bloom, that the bees gathered pollen. With that exception, they have been unable to get any forage, except flowers fed them. I am trying to keep bees, and hitherto have had reasonable success, up to within the last two weeks. Since that time, the conceit has gone from me. I went into winter quarters, with twenty-seven colonies. They were in the Champion hive, part of them in the size containing eight frames, and part ten. In the fall I removed to the cellar twelve colonies, part in the large, and part in the small hives. In February, those in the cellar were all in good condition, but those on their summer stands were more or less affected with the dysentery. On examination I found every small hive affected, but no signs of dysentery in a single instance among the large ones. A few warm days seemed to set all right, and I was pleased at having come through the winter without losing a colony, but my rejoicing was of short duration. About two weeks ago the weather was pleasant, and the bees flying, when to my surprise four colonies left their hives. We succeeded in settling one, but the other three went "where the woodbine twineth." I examined the deserted hives, and found all nice and clean, and plenty of honey-brood and eggs. It is a mystery to me what caused it. At first I feared that it was caused by having previously examined them to see if all was right, but my neighbors suffered loss in the same manner. They had a large colony in a hive, which came out and settled on a tree. They knocked the hive to pieces and transferred the comb with what honey they could save, to a movable comb hive, and then hived the bees in it. They went to work immediately, as if nothing had happened. The remaining honey in the hive weighed 40 lbs. So neither disturbance nor want of honey could be the real cause. Now what I desire to know is: Are large hives less liable to be affected with dysentery, than small ones? And what is the cause of bees leaving their hives, stores and brood, as ours have done? Can some of your numerous correspondents give the desired information?"

D. D. PALMER, Eliza, Ill., writes:—"Wishing to procure a basket-full of new chips, I left New Boston at 4 p. m. April 16, in a covered buggy drawn by the iron horse and reached Keokuk at 9:15 p. m., crossed the Mississippi on the iron bridge, and on awaking next morning I found myself at Hamilton, Ill., and within about two miles (bee-line) of Ch. Dadant and Son. According to directions I followed up the creek, occasionally stopping to view nature's works, which in this place is grand and picturesque, till I came to a town composed of bee-hives of various colors and arranged in rows under the shade of a natural grove. At the upper end of Main Street and near to the above mentioned town is the residence of the proprietor; to which I hastened my steps and found myself in time for breakfast. Bees and bee-keepers was the topic of conversation during which I was shown photographs of a few apiaries and of many eminent bee men of Europe and America, besides an endless number of circulars of bees and hives. Every letter and circular received finds its appropriate place for preservation."

I have formerly thought, when reading an

article translated from some foreign bee journal that, we should be very thankful to Dadant and others for that tedious task; but finding that C. P. Dadant can take a French or Italian journal and translate in English as fast as we usually read, I have concluded to give him credit for his ability instead of a tedious task. C. P. Dadant announces that it is warm enough to open hives; we arm ourselves with bee hats, made by attaching bobonette to a straw hat and at the lower end is a piece of elastic which fits around the neck, a shallow box with a handle in the middle and divided into suitable apartments in which is carried the different articles needed in the apiary.

A number of hives are to be fixed for shipping and now for the *modus operandi*. Each hive is examined to see if pure and if strong enough to fill the order. To secure the frames an ingenious bent wire is used at the bottom, it being one of Ch. Dadant's inventions, next the frames are properly spaced and nailed with brads, then the honey-board is nailed and cover etc. I saw several queens and they were very uniform in size and color. They are well located for shipping facilities, but the honey resources are not plenty when compared with Sweet Home. In all things they have system and order. The hives are all numbered behind and to each is nailed a tin black-board holder, the black-board being about 3x4 inches, having upon the corner of one side the number of the hive and upon the opposite side a liquid-slating on which is written with pencil the condition of the hive, age of queen etc., the writing is turned inward to prevent being erased, when empty the black side is turned outward. The numbered side can be inverted or changed in various ways to mean as many different conditions. I said that his hives were numbered, the nuclei for raising queens were numbered by letters of the alphabet.

They use the wax comb-guide described in Gleanings page 12, vol. 2. Also the divisible frame, *i. e.* dividing a full sized frame into equal halves for the nuclei—see Ch. Dadant's description on page 29 of Gleanings vol. 2.

They believe bees should have salt, and for that purpose they have a stand in the apiary on which they invert a small-mouthed jar, having previously filled it with strong brine and covered with muslin which is tied around the neck. Is salt necessary or beneficial? Of what use do bees make of it? Why do they prefer water that is salty?

C. P. Dadant used a slate pencil for his black-board writing, it suggested the idea to me that a slate would be better than a board, I accordingly procured me eight school slates for 70 cents, which I cut in 64 pieces about 2½x3 inches each of which is large enough. On one side I have put the number of hive and on the opposite I put the record and condition of the hive. While talking with W. T. Kirk of Muscatine, Iowa, about the above he said: "Why not drill a hole in the slates and hang on a nail?" If slates could be procured without frames they would not cost, labor and all, over one cent each, which is less than the black-board, and so far I think much better to write on. With a rule and slate pencil I laid off the slate and then I sharpened one end of a file with which I cut it on opposite sides and then broke as glaziers do. And with a brace and the above file I drilled the holes, slate is soft and easily cut.

I forgot to mention in its place that Dadant uses the "quilt" or rather a very heavy muslin, they dip the edges in bees-wax to prevent the bees cutting, then the original honey-board is placed on top to hold it down.

J. M. SIMMONS, M. D., Lauderdale, Miss., writes:—"I bought 4 box hives, and one of King's \$10 close-top hives and transferred my bees and combs to them."

King has the idea in some respects if he would cut the frames to ⅝, leave off his supers and make the hives longer and deeper. Last fall having read so much by Novice about wintering I reduced my 10 stocks to 6, but I think the 10 would have wintered better and now I would have 10 stocks instead of 6. Last fall I sent to R. M. Argo for two Italian queens and he sent me some fine-looking ones, but no directions about making queen cages, so I lost one in introducing them. After my loss I introduced one of the old queens and they must have killed her, as I found the hive queenless when I examined it in January. I commenced this year with six hives but having to unite the queenless one and letting one starve I reduced my stock to four. In wintering my stocks last fall I did not kill any of the queens, and the first warm spell this year, two swarms came out of two of the united hives and went back. I examined the hives and found a dead queen in each and many bees dead in the hives and outside. Well, I supposed just then that I was minus two queens and many bees from disease, but I found upon examining the frames two very fine large queens and they are to-day the finest queens I have, and have the largest stocks.

These swarms remained in those hives all the winter and as soon as the weather moderated they took a notion to separate but finding it rather too cold outside, they returned and were killed. In March I was examining one of my hives and found them killing their queen, superseding her, for they had started a queen cell. I cut it out and gave them a frame of eggs and brood from my Italian stock and now have two fine Italian queens and two stocks instead of one, but I am afraid they met common drones instead of Italian as I had some of both. I have tried to keep the common drones out of my hives by killing and uncapping. I want to Italianize all stocks this year.

I find there are two kinds of native Southern bees in this section, one a little black bee, cross and spiteful, stinging every thing that comes near, the other a large yellow bee as large as the Italian and very much like them in their disposition and habits, but they have none of the Italian marks, they must be a cross of the Italian, for my queens are as large or larger than the Italians, but much darker. I never use smoke unless I want to unite them, and not always then. I have dispensed with supers and converted my two-story hives into single story hives 34 in. long holding 21 or 22 frames 12x9 in. inside measure.

My bees have quit sugar since they got natural supplies, unless it is cool or raining, then they work on it. I don't think handling bees often injures them, if the weather is pleasant, for mine don't stop working unless I disturb them a good deal, and I think sometimes that opening the hives is a benefit and starts them out when if left alone they would do nothing.

I am trying a small patch of Alsike clover to see if it will do for our hot climate. Buckwheat does well here, tried it here last year and bees worked on it freely. This has been a bad season for bees but they have commenced gathering honey. The great trouble with us is insects, and want of frame hives, most all use the box and gum hives and call the queen the king bee, and say it is wrong to sell bees but you can steal them and all is 'O. K.'

stored and reserved until spring.

While extracting we often observe that cells of certain combs are about two-thirds filled with pollen while the other third is filled with honey and capped over. This was evidently put up for spring use. The honey being put in with it for its better preservation. We all know that pollen moulds very easily. Can we not learn something from this fact also? Several combs containing pollen could be preserved in honey. And we want to know what would give the queen the laying fever in the spring more readily than the insertion of a frame of pollen dripping with honey.

We trust these facts will receive due attention during the coming fall.

"SCIENTIFIC."

For the American Bee Journal. Chips from Sweet Home.

DEAR EDITOR:—Ten years ago we became interested in bees by taking orders for the Thomas Hive. We handled bees some for six years and four years ago Palmer Bro's made a special business of them for two years, then we dissolved partnership and I bought *Sweet Home*. In the winter of '72 and '73 I lost all (54 hives) the bees I had. Of some 700 or 800 hives between New Boston and Muscatine (20 miles) only about 15 or 20 were alive in the spring, and last winter took the most of them to parts unknown. In the spring of '73 two neighbors and I bought 96 hives in Kentucky, I shipped them 80 miles by rail and about 600 miles by boat. I increased my share (40) to 95 hives, this spring had 35 living. I now have (July 10,) 67 hives, am running them for extracted and box honey. I use Longstroth and Thomas Hives, am 29 years old, weigh 140 lbs., have a library of books and geological specimens, have an observing hive in the parlor, the bees pass out and in through the wall, all the workings of the once mysterious hive can be seen by lamp-light or sun; it consists of one comb and glass on each side. Our apiary is shaded by a natural grove. Our Sweet Home Honey Slinger consists of a stationary tub with handles and a faucet at the side or the bottom, and a revolving frame which is run by fanning mill gearing, it is much better than a revolvable can. We carry our combs to and from the hives in a rectangular frame supported by four legs which are long enough to keep the frames from the ground; the frame is carried in front of the peason by grasping the two end pieces; the combs are so placed in the frames that the ends are to and from us. If robbers are plenty we jar it as we enter the honey-room, and if a few follow us in they fly to the windows, which are made *revolvable*, so that a *flip* puts them outside.

HOW WE SAVE COMBS FROM THE MOTH.

The *we* just mentioned consists of myself and a blue-eyed boy of 21 months old, we two complete the family of Sweet Home. We have had a great amount of good comb destroyed by moths. We tried limestone, and last season we hung them on poles in the shade; the wind blew them down, damaging them, but now we have them *safe* at last in our cellar, which is 20x24 feet, having a chimney in the center with a draft-hole at the base which is continually drawing the damp bottom air out; also 2 windows on each side covered now with fine wire-cloth. Last spring we put our combs (enough for a hundred hives) in there, soon we found the moth eggs hatching, it being cold in the cellar the worms nestled closely together and we readily fed them to our poultry; but some few were overlooked and are coming out winged moths and are seen to fly to the windows where I am certain to put my fingers on them. My bee-shirts I have made as others except buttons a little closer on the bosom and elastic in the waist-bands.

While on a visit to Dadant & Son., of Hamilton, Ill., I became very much in favor of using the black-board instead of a book as I had formerly been doing; but seeing C. P. Dadant use a *slate* pencil, I thought why could not slates be used instead of boards, I accordingly procured a few school slates from which I took the frames and cut them in pieces of 2½x3 inches boring a hole in the middle of one end and hung them on nails, these slates cost me a little over a cent apiece and the cutting is readily done by any sharp instrument and a straight-edge. They are cheap, durable, writing-lasting, and always just where we want them.

Mercer Co., Ill.

D. D. PALMER.

For the American Bee Journal. My Experience.

I have just noticed Mr. C. Hester's "Random Notes" in the June number of the NATIONAL BEE JOURNAL, as we live only eight miles apart, I will give you my mode of operating with my bees last winter, my success this season &c., &c. I have no cellar to winter in, consequently I winter as you may say out of doors, it's true I have them under a shed, and protected from the north and west winds. I went into winter quarters last winter with 14 colonies, at the time I put them up, there was not one pound of honey in the 14 stocks. I fed them sugar syrup, made precisely as Judge Hester did his and fed them in like manner, by pouring in the empty combs, but I fed mine at intervals through the winter, that is on warm days. I came through the winter with 10 stocks losing four, which I

ing. The committee reported the following questions to be discussed. Is the Italian bee superior to the Hybrids or Natives? 2. Is artificial swarming as good as natural? 3. Is upward ventilation necessary after bees are housed in the cellar as repository? 4. Is the single hive as good as the double-story hive for extracting?

All the above questions were warmly discussed and the result to the first question was, that Italian are not superior to a good Hybrid in storing surplus honey in boxes, but are superior in gathering honey when empty combs can be given and extracted. Natives or Blacks are nowhere. The second question showed a large preponderance in favor of natural swarming, and artificial swarming or dividing should only be done when a quick increase of stocks are wanted. The opinions to the third question was general, that upward ventilation should be given to bees in damp cellars or repositories, but are not necessary in dry places. The fourth question was answered to that effect that the single story hive is preferable in a mild and cool season, but in a hard season the two story hives are better for extracting honey and handier for handling the bees when we do not extract.

Moved by Wm. Wolf, not to organize and elect officers this meeting, but to appoint a committee of three to draw a constitution and report next meeting, carried. Wolf, Fuerbringer and Roepler was appointed to serve as said committee. Meeting adjourned until the 13th day of September, 1874, at one o'clock P. M., at Wm. Wolf's residence.

WM. WOLF, C. GRIMM,
Sec'y. pro tem. President pro tem.

For the American Bee Journal. Chips From Sweet Home.

Many bee-keepers are like ourselves—few bees and many hives and combs. How can we get a quantity of honey and a large increase?

We will tell you how we do. Many of our hives were very weak. We took from the strong and gave to the weak, till we had all strong. Then from our best queen we raised queens, and as soon as they were ready, we formed nuclei by taking two combs and cutting out brood and adhering bees, from two different hives. These we put in a new hive on the right side—as we face the hive—and put in a division board. A few minutes or an hour after forming we give them a young queen. Or another way, but a little more trouble, when your queen cells are capped—on the eighth or ninth day—put one in each comb, and leave one day to fasten; then give one of these frames to nuclei, and all or more bees than adhere to the frame and comb of cutting brood

from another hive. We mark on our slate, "Aug. 2.—Got y. q." In five or six days we look at them and if queen is seen, we say, "Aug. 7.—Saw q." If she is out of the cell, and we don't see her, we write, "Aug. 7.—Q. out." In a few days we examine and find the queen laying; we mark, "Aug. 12.—Eggs." If the weather is warm we look at them in four days, but if cool, not for six or seven days, and supply them with a comb of cutting brood and an empty comb, and write on slate, "Aug. 16.—O. K." Thus we continue, and in from two weeks to a month we make a strong colony of them. If they fill in too much honey, we sling out, so as to give the queen "elbow room." When every comb is full of brood and the hive crowded with bees, we put on our boxes; or, if we wish to sling, an upper set of combs. If for box honey, we take off boxes once a month and put those combs with most brood outside, and those filled honey, we sling and put inside—thus we keep a greater quantity of brood rearing, and consequently more honey stored. When we have tested the queen we mark on slate, if pure, "I. Q.," if hybrid, "H. Q. 1874."

Readers will remember that Sweet Home has a continual average flow of honey the whole honey season.

We wrote "Novice" about the slate, and he speaks of them in a manner to appear as though we carried a "slate and pencil" around with us, and then he refers to his "Queen Register Cards," illustrated in his number. (See *Gleanings*, page 267.) These slates are the cheapest and most convenient register we have used. When we wish to make a new entry on the slate we erase the old. Sometimes we would wish to make a note, which we could not do on the slate. If we have anything special, we can write on out side of slate—such as "Feeding or gave queen, or queen cells, Aug 4," etc.

Eliza, Ill.

D. D. PALMER.

A Proposition.

"Can the time of Swarming be controlled?

We know if we place a queen cell in a colony of bees without removing the queen, the cell will be destroyed.

The writer proposes the following experiment to his aparian friends: Isolate one or two combs from the rest of the hive, without removing them from the hive, and so arrange the division board that the bees may retain the same scent, and let the bees make queen cells. At the expiration of eight or nine days withdraw the division, whatever it may be—whether of glass, wood, or wire cloth, or a combination of all three—and as the bees are of the same scent, it is possible the old queen may depart with a swarm. C. C. MILLETT.

ian in its native land. But considering that his opinions are entitled to much credit, it is true in point of fact, that the *pure* Italian queen, *purely fertilized*, EVER produces "black" bees, either workers or queens? If this be so, then the Italian is only a mongrel species, and has no fixed marks by which it can with certainty be distinguished.

I am well aware that many imported queens, as well as many that are bred in this country and called pure, fail to duplicate themselves in their queen progeny, and produce workers of various markings. I had, until recently, in my own apiary an imported queen, one that was brought over last year by Mr. Dadant, whose worker progeny were two and three banded, and whose progeny varied from the brightest yellow to the deepest black. She was of extraordinary fecundity, yet fell far short of being what I considered a *pure Italian*. There was evidently black blood either in her own veins, or in those of the drone by which she had been fertilized. How she received this black blood in Italy is more than I can tell, but the effects of it were too plain to be mistaken.

The true characteristic or test of Italian purity, in my judgment, which is based upon close observation for several years, is the uniform and invariable showing of three yellow bands by the workers. If there is one worker in a thousand that fails to show the third band distinctly, or if there is a want of uniformity in the brightness of the bands, the mother of such workers will prove an unsafe breeder. And it would not do to trust to the appearance of old bees, or of bees after they have begun to work. It is then quite difficult to detect the impurity. The best, and in my opinion, only time when we may determine with certainty, is when the young workers are just emerging from their cells. If there is a two banded young bee on the cord it will soon be discovered; but if all the young bees are of a light milky color—none with a bluish, or dark back, and narrow light brown just behind the waist—the mother of such workers may be relied on to duplicate herself without fail in her queen progeny.

I think we may restrict the test a little further, and require it to be applied to the brood of young queens only. I have had a few queens, that, when young, produced occasionally a two banded bee, but whose workers, the second and third year, appeared to come fully up to the standard. I have tried breeding queens from such mothers, and have had to discard them as impure. I would occasionally find among their queen progeny, young queens with broad dark rings around their bodies, a very bad mark on a young queen. Such

ringed queens, if fertilized by black drones are apt to produce, more or less, black workers. My experience convinces me, that an Italian queen, whose own blood is entirely pure, will never produce a black worker, notwithstanding she may have mated with a black drone. And where an Italian queen does produce even a "few" black workers, although "the thousands" of her brood may be well marked, it may be set down that the mother of such a queen is either impure or impurely fertilized.

I am aware that the views expressed above differs from those held by several at least, of our best apiarists. It may be that I am wrong and they are right; yet I must be permitted to entertain the honest convictions of my mind, which I cannot resist until I have more and very different light on the subject.

M. C. HESTER.

Charlestown, Ind.

For the American Bee Journal.

Chips From Sweet Home.

HOW TO GET THE MOST BOX HONEY.

Taking our location where we have almost a continual flow of honey from early spring till heavy frost cuts it short, we would proceed as follows: Get our hives crammed full of bees by giving no more room to the bees than they can fill; to accomplish this we use a division board and crowd one or more combs to one side, as soon as they have sufficient bees we insert an empty comb and move the partition board and continue thus to do till the hive is full of bees and combs full of brood, we then, and not till then, put on our surplus boxes. If previous to this time they gather more honey than they consumed in raising brood, we empty with the honey slinger so as to give the queen "elbow room," after our boxes have been on a month we remove them and see the condition below, if they have filled the side combs with honey, which they are apt to do, we remove them and sling the honey out, placing the empty combs in the center and those with most brood outside; give the queen room to deposit eggs; raise all the brood we can and the honey will come. The nearer the brood we put our surplus boxes the less honey will be stored below and the more in the surplus boxes.

All hives with surplus boxes or a set of frames above for slinging should be examined below once a month and in case much honey is stored there it should be slung out as it cramps the queens brood department. Many queens are called unprolific because they have no room to deposit eggs. Keep hives strong by raising all the brood possible and the honey will be gathered.

SENDING QUEENS BY MAIL AND EXPRESS.

We have always sent our queens by mail, and expect to do so as long as Uncle Sam will permit. My reasons will be found in the difference of the following two examples. R. M. Argo sent me a queen from Lowell, Ky., a distance of 300 or 400 miles by mail which cost 4 cents, it was a week on the road. Ch. Dadant and Son sent me a queen from Hamilton, Ill., a distance of 80 miles by express to New Boston which cost 60 cents, it was over a week getting to New Boston and the express master notified me of it by mail. I had already made one trip (8 miles) for it, and the next day I got it; they were 13 days on the road. The above needs no comment. I get a different box from every breeder, weighing from half an ounce to a pound.

I will describe the box I use and the mode of putting up. The end pieces are 1 inch wide, $2\frac{1}{2}$ in. long and $\frac{1}{4}$ inch thick. Two sides are $\frac{3}{4}$ in. wide, 3 in. long and one eighth in. thick. The top and bottom are $2\frac{1}{2}$ in. wide, 3 in. long and one-eighth in. thick. We use cigar box nails, nail the two sides on the ends and then bottom, in the top put one nail in the middle of one end, which leaves it to swing open, now cut a piece of sealed honey comb 1 inch by $2\frac{1}{2}$ in. cut off the cells on one side near the base, lay this piece where the bees can clean off all the loose honey and no more, now place it in the end of your box, having the capped cells towards the inside of the box, then put in two nails through the box in the comb to prevent its moving, take the queen by the wings and slip her in the box, the cover being swung open a little, then put in 15 or 20 worker bees from the same hive and nail. Put on the sides the address with a lead pencil and a two cent stamp on the end and drop in the post office and Uncle Sam will do the rest. D. D. PALMER.

Eliza, Mercer Co., Ill.

For the American Bee Journal.

Italians vs. Black Bees.

As everybody likes to talk of themselves, and as amateur bee-keepers seem to be no exception to the rule, I will proceed to do likewise; and now as I promised in the May number of the *National*, I will give a sort of epitome of my experience, with both black and Italian bees the past summer.

I was anxious to know if this talk about the superiority of Italian bees over our blacks was *interested talk*, or a real fact; at the same time I could not believe that *all* the eminent bee-keepers of the country would so emphatically praise the Italians unless there was *some* foundation for it.

So having two Italian colonies, I bought two black colonies, and placing them side

by side, let them proceed to their level best. Previous to my purchase of the blacks (in April, I think), I had been feeding the Italians as often as the weather would allow me to open the cap of the hive (American Farmers', 12x12 inside). So I think the Italians had some the start of the blacks in that respect, though they were about equal in strength on coming out of winter quarters.

Now for the result. I divided both of the Italians and only one of the blacks, leaving the other for the surplus honey. The Italians have become as strong in numbers as the one undivided swarm of black bees, and one of them cast a natural swarm July 31st, which I wintered with a nucleus which I had started from one of the other Italians.

SUMMARY.

From two Italians I now have three very strong colonies and two average ones; total, five. From two blacks I have one average colony, and two scarcely fair ones.

As to honey, the drouth came in June and white clover was a myth, but during July and August they all held their own, gradually increasing in weight, (I have an apparatus for weighing like one suggested by Burch, I think), and since September 1st they have been carrying in "dead loads" of gold-wood and aster honey, so that I have extracted eighty pounds from the two strongest Italians, and the one strongest black colony. Further, I have been fighting the moth all summer in the two divided black colonies, while the Italians will not allow a moth to slap his villainous little pinion in sight of their hive.

I must, therefore, say that my prejudices (if you call them such), have been removed. Though I never was prejudiced against the Italians as such, but it is my nature to assist the weaker side always, and when I heard every one praising the Italians, I thought I would give the blacks an equal chance, "a fair field and no favor, and may the best bee win"; and for the future I shall pin the Ligurian colors to my sleeve and continue to say: Glorious little worker, from whom we may learn glorious things! from whom even the wise king could be instructed. Long may thy golden bands continue to flash in the sunlight of happy rural homes! Worker! with an industry that is never tiring, never ceasing; a perseverance that could teach a Hannibal lessons in persistence; a method that could teach "the art of order to a peopled kingdom"; a bravery in defense of home and kindred that even a Winkelreid could scarcely excel!

Verily, I should say: "Go to the BEE, thou sluggard, consider HER ways and be wise!"

I would like to ask some reader of the JOURNAL to describe "aster" to me.